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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,109	02/12/2002	Tetsuto Kageyama	03500.016181	3710

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EXAMINER

TRAN, HUAN HUU

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

FILE CO?

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Office Action Summary	Application No. 10/073,109	Applicant(s) KAGEYAMA, TETSUTO	
	Examiner Huan H. Tran	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1, 3, (4-11)/1, 12, 14, 15/12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13, 15/13 is/are allowed.
- 6) ☒ Claim(s) 2, (4-5, 10-11)/2 is/are rejected.
- 7) ☒ Claim(s) (6-9)/2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2861

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species (ii), claims 2, (4 to 11)/2, 13 and 15/13, in Paper No. 6 filed on 04/01/03 is acknowledged. The traversal is on the ground(s) that the Office did not identify any embodiments and that the claims are to a "reasonable" number of species, all of which involve control over negative pressure in an ink jet recording apparatus. This is not found persuasive because as stated in the restriction requirement more than one species of an invention, not to exceed a reasonable number, may be specifically claimed in different claims in one national application, provided that the application also includes an allowable claim generic to all the claimed species and all the claims to species in excess of one are written in dependent form (37 CFR 1.75) or otherwise include all the limitations of the generic claim (37 CFR 1.141(a)). This requirement is not met as there is no generic claim and the claimed species include mutually exclusive characteristics (MPEP 806.04(f)).

The argument made that claims are never species (MPEP 806.04(e)) is not persuasive because the terms embodiment and species are used interchangeably in the aforementioned section of the manual. Because claims are definitions of inventions and are part of the disclosure (MPEP 2163.06(III)), argument made that the only two detailed embodiments disclosed cannot support a three-way election of species is not persuasive and also raises an issue of an inadequate written description of the claimed species.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1, 3, (4-11)/1, 12, 14, 15/12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely

Art Unit: 2861

traversed the restriction (election) requirement in Paper No. 6 filed on 04/01/03.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2, 4/2, 11/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al (US Patent No. 4544931).

With respect to claim 2, Watanabe et al. discloses an ink jet recording apparatus comprising:

a thermal bubble recording head for discharging ink from plurality of discharge ports and recording onto a recording medium;

a carriage (110) on which said recording head is mounted and which reciprocally scans on said recording medium;

recording medium conveying means (103) for conveying said recording medium in the direction perpendicular to a scanning direction of said carriage by a predetermined distance each time said carriage reciprocally scans on said recording medium;

an ink tank (Col. 6, line 8) mounted at a position where it does not exercise an influence on the reciprocative scan of said carriage and the conveyance of said recording medium by said recording medium conveying means;

an ink supply tube (9) for supplying the ink from said ink tank to said recording head; and

control means (see Fig. 5) for controlling an ink discharge state of said recording head on the basis of an image signal which is inputted from a host apparatus, wherein said control means adjusts a non-recording time as a time during which no ink is discharged from said recording head so as to recover a pressure in said supply tube.

With respect to claim 4/2, Watanabe et al. further discloses a pressure smoothing tank (1) which can store the ink of a predetermined capacity is arranged between said supply tube and said recording head in order to suppress the increase in negative pressure in said supply tube.

Art Unit: 2861

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5/4 rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al.

With respect to claim 5/4, Watanabe et al. does not disclose any specific capacity of the subtank (1), whereas the claim requires the capacity of such subtank to be equal to or larger than 1cc. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the suitable capacity of the subtank (1), since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claim 10/2 rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al in view of conventional art.

Watanabe et al. does not disclose a recovery means for recovering a discharge state of the ink of said recording head to a good state by forcedly discharging the ink from each discharge port of said recording head. However, the Examiner takes official notice that such recovery means is well known in the ink jet printing art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a recovery means in the printing device of Watanabe et al. for recovering the discharge state of the recording head.

Allowable Subject Matter

9. Claims 9/4, (6-8)/2 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claimd 13, 15/13 are allowed.

Art Unit: 2861

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan H. Tran whose telephone number is (703) 308-0749. The examiner can normally be reached on M-F with alternate Friday off, from 7:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1749.



Huan H. Tran
Primary Examiner
Art Unit 2861

hht
June 12, 2003